



# Kentucky Department of Education

## Office of Education Technology - April 2019

## Kentucky's digital-and future-ready students and teachers

We are headed toward greater and more meaningful digital interactions between family, school and community. We believe digital-and future-ready foundations can:

- help empower student personalized learning experiences and preparedness for college and workforce
- increase teacher productivity and digital workflows
- enhance communications and invaluable collaboration models
- expand data enhanced decision making
- and, provide a robust infrastructure for endless possibilities.

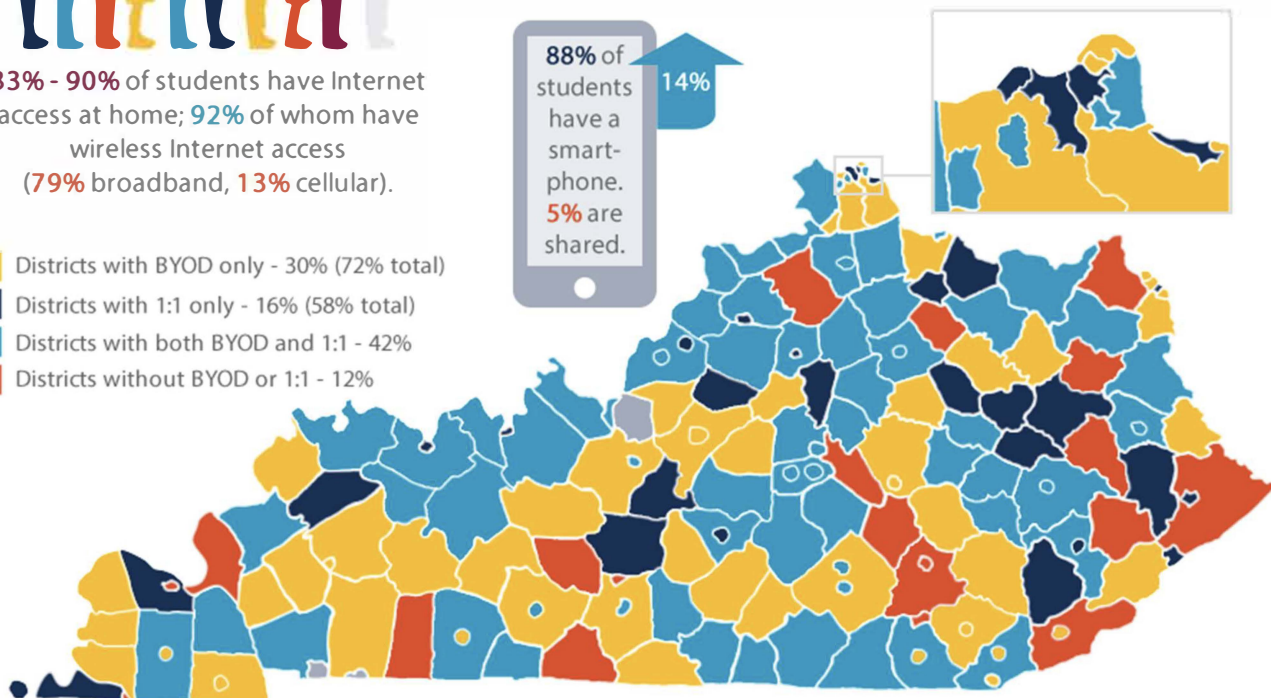
## Access

Digital access at school and at home helps us understand how “plugged in” and “connected” our learners are during the school day and beyond. Students without access to technology in school and at home are less likely to engage in 21st century learning skills. Ease of access is a precursor to the desired shifts in student outcomes powered by digital tools and resources. Strategies such as 1:1 and Bring Your Own Device (BYOD) are being adopted across Kentucky to help meet this need.

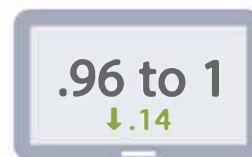


**83% - 90%** of students have Internet access at home; **92%** of whom have wireless Internet access (**79%** broadband, **13%** cellular).

- 53** Districts with BYOD only - 30% (72% total)
- 28** Districts with 1:1 only - 16% (58% total)
- 74** Districts with both BYOD and 1:1 - 42%
- 20** Districts without BYOD or 1:1 - 12%



## Student to Digital Device Ratio



# 640,390

Student Instructional Devices

**100%** of schools provide Wi-Fi access to students



Of these, **95%** schools have implemented dense Wi-Fi networks capable of supporting BYOD or 1:1 initiatives

## >260 kbps

(average)

Bandwidth per student available through statewide fiber network service

## 100%

of Kentucky K12 **public schools** and district offices are connected by the most reliable, highest speed and quality fibered internet services in the country.

School fiber internet total usage increased

## +35%

over past 24 months while maintaining up time of

## 99.99%

Anytime, Anywhere, Always On, Differentiated Teaching and Learning

# Future-Ready Student

Strong online skills, such as confidence using shared digital workspaces, have been correlated with increased collaboration in the classroom.

Students can think about concepts and interactions in more varied ways with the affordances of multimedia and multimodal representations.

Students who have access to computers and the Internet are more likely to use technology more frequently and have better technology skills.



84% of KY parents believe their child's school encourages technology use for teaching and learning



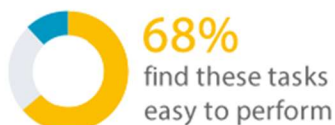
83% of KY parents believe technology use in class can enhance student learning

These skills are a precursor to the use of digital creativity, digital collaboration, digital communication and critical thinking in the classroom and while learning.

Students can also personalize the use of their technology and leverage greater access to engage in anytime, anywhere learning on topics of their choice.

## MULTIMEDIA SKILLS

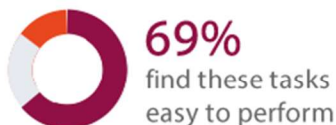
Student reported ease of editing a photo



68% find these tasks easy to perform

Only 8% said the task was impossible

Student-reported frequency of uploading photos from a digital device



69% find these tasks easy to perform

Only 15% reported never performing this task

Student-reported frequency of downloading or streaming music, podcasts or other audio



78% at least once monthly

Only 14% reported never doing so

## FOUNDATIONAL SKILLS

Student-reported ease of connecting devices via bluetooth or wi-fi



88% find these tasks easy to perform

Only 2% said the task was impossible

## COLLABORATION & ONLINE SKILLS

Student-reported ease of collaborating using online documents



77% find these tasks easy to perform

4% (-3%) said the task was impossible

Student-reported frequency of reading online content



74% at least once a week

10% (-5%) said never

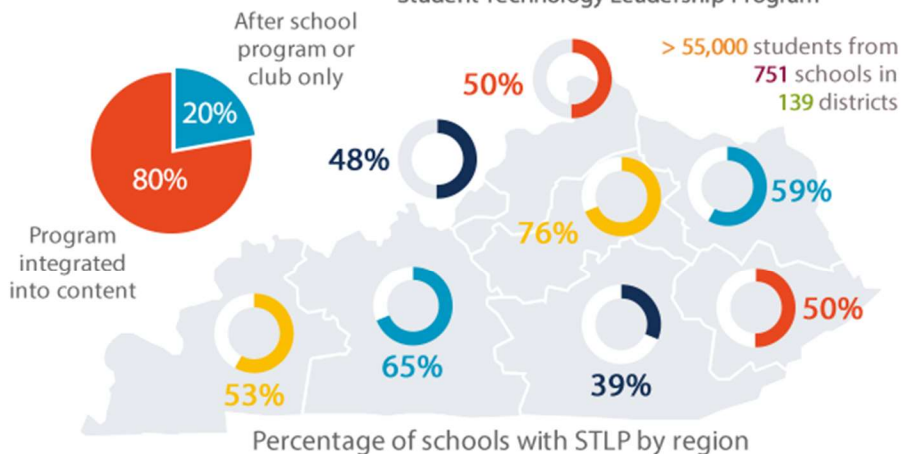


46% ↑1%

of students are allowed to use personal mobile devices in class for academic reasons



Student Technology Leadership Program



# 21st-Century Teacher

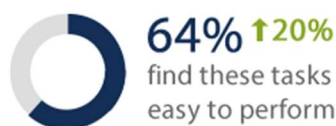
KY is cited as a top 3 state in teachers accessing and using quality data to raise achievement for all students (Data Quality Campaign)



Teachers with strong foundational skills are able to handle administrative classroom tasks easily, including attendance and grading. Further, teachers who are confident in their ability to use foundational skills are often able to use these skills when learning new online and multimedia skills.

## MULTIMEDIA SKILLS

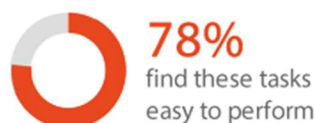
Ability to manipulate photos and record and edit audio or video



39% expressed interest in Professional Development (PD) in this area

## ONLINE SKILLS

Teacher reported ease of collaborating using online documents



29% expressed interest in PD in this area

## FOUNDATIONAL SKILLS

Basic computing skills - sending email and creating spreadsheets



14% expressed interest in PD in this area

More than 4 of 5 (84%) teachers report having sufficient access to instructional technology...

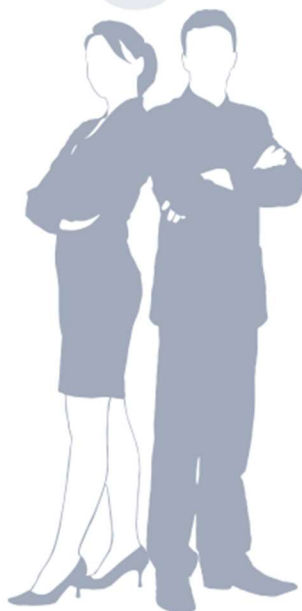


yet only 2 in 5 (39%) have access to an integration specialist or digital learning coach.

91% of these are encouraged to use technology and learning by school leaders

**90%**

of KY teachers believe technology enhances learning and their daily lives



## CONFIDENCE WITH TECHNOLOGY

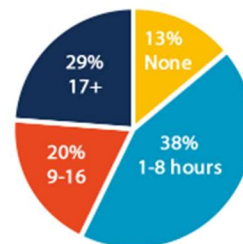
**3%↑ 77%**  
can solve their own tech problems



**69%**  
easily find new technologies to meet their teaching goals



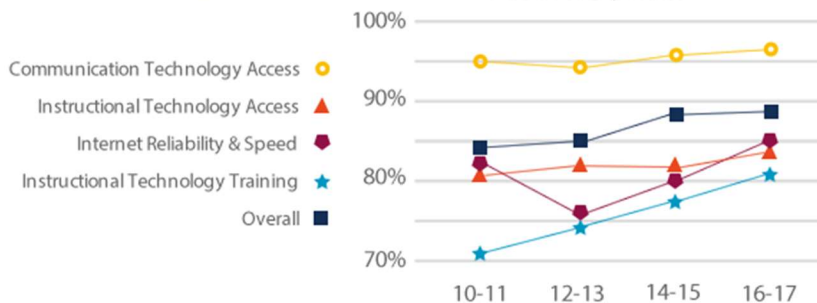
Teacher-reported hours spent per year participating in school-sponsored technology related PD



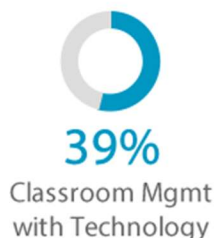
80% of these teachers say the quality is average or above average

## Kentucky Teaching, Empowering, Leading and Learning (TELL) Survey Results

Positive Responses

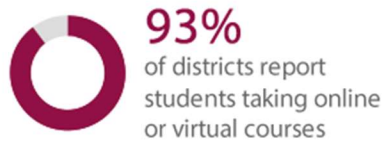


## Most requested education technology PD topics



# Tech Trends

## ONLINE & VIRTUAL LEARNING



Of these, **49%** are girls, **51%** boys.

## LEARNING MANAGEMENT SYSTEM



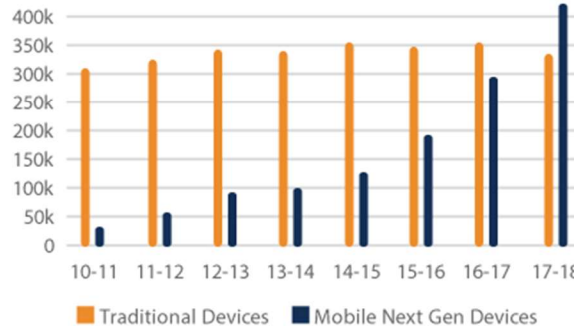
The majority of adoption is with free cloud services. However, there is an upward trend toward paying for a solution.



More than **4 Billion** unauthorized connection attempts against school networks are blocked annually by statewide security services.

**20** large-scale organized network attacks aimed at denying Internet access to all Kentucky schools and districts were successfully mitigated.

## Traditional vs. Mobile/Next Generational Devices



## SCHOOL DIGITAL DEVICE FOOTPRINT



**94%** of districts are using Google Apps for Education. Of these, **79%** have integrated with Office 365 & Active Directory

## KETS Offers of Assistance Per Student



\*For our 2019 infographic, we've presented subscript indicators for year-over-year changes to data where applicable. **GREEN** indicates favorable changes, **RED** unfavorable, and **GRAY** neutral.



## Sources

Kentucky Digital Readiness Report: [http://applications.education.ky.gov/trs\\_reports/](http://applications.education.ky.gov/trs_reports/)  
 TELL Kentucky: <http://www.tellkentucky.org/results/25>  
 BrightBytes: <http://brightbytes.net>  
 Digital Driver's License (DDL): <http://iDriveDigital.com>  
 Google Analytics  
 Open House: <http://openhouse.education.ky.gov>

**2019**  
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